Air Pollution Control

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A. SUMMARY

According to estimates of the Hungarian Government's National Environmental Program, approximately $500 million public and private funds will be devoted to environmental projects in 1998. About two-third will come from the central budget, with the rest provided by companies, municipal governments and individuals. The total Hungarian market for air pollution control is estimated at $70-80 million in 1998. The U.S. import market share is estimated at 5 percent. U.S. environmental consulting companies seem to be more aggressive and successful in the Hungarian market so far than manufacturing companies supplying equipment and technology.

Hungary has been a signatory to the Geneva Convention on Long Range Transboundary Air Pollution (1979), the Helsinki Protocol to restrict the emissions of SO2 (1985), the Montreal Protocol to protect the ozone layer (1987), the Sofia Protocol to restrict the emissions of nitrogen oxides (1988), the Rio Framework Convention on Climate Change to stabilize the concentration of greenhouse gases (1992), and the Kyoto Conference to reduce CO2 emissions (1997). Furthermore, the fact that Hungary became a member of the OECD in 1996 and made a commitment to joining the EU in a few years have increased government attention to environmental issues. Hungary has made impressive progress in the past six years harmonizing its laws and regulations with EU legislation. However, in the EU's recent opinion of Hungary's preparedness for accession negotiations, the environment was singled out as an area that is still lagging behind. Calculated expenditures to implement the 6-year National Environmental Action Plan passed by the Parliament in 1997 are approximately 4 billion dollars. The Hungarian Government is working out the details of the budget, which will eventually require businesses, municipalities, and citizens to contribute up to USD 2 billion over the next six years. The Ministry of Environment expects that the "polluters pay program" and incentive systems for green technologies will have the most direct impact on businesses.

Once the National Environmental Action Plan is enacted, annual spending on environmental protection will near the European average of 2 percent of GDP. Currently, Hungary's spending on environmental projects is low with 1.2 percent of GDP.

A major change is expected in the financing of environmental protection. Currently, some 60-70 percent of environmental expenditures are sourced from state and municipal budgets (including the Central Environmental Protection Fund), while businesses contribute only 10 percent. It is expected that the share of central funding will decrease to 50 percent, while the share of the business sector will grow to some 40 percent. Nationwide/government projects are controlled by ministries, government agencies and local municipalities, while industry related projects are initiated by the companies themselves.

B. MARKET HIGHLIGHTS & BEST PROSPECTS

Market Demand

The environmental industry, as an industry sector, has evolved in Hungary in response to transition to a market-oriented economy in the early 1990s. The country's spending on environmental projects is relatively low, just over 1 percent of GDP in 1996/97. Today, expenditure on air protection accounts for about 15 percent, while spending on water pollution abatement accounts for 55 percent and on waste management about 10-15 percent of total spending. According to the National Environmental Action Plan, during the next six years, the share of air pollution abatement expenditures is expected to double, while the share of waste management is expected to rise to 20 percent of budgetary expenditures.

A new, EU-conform Environmental Act No 53/1995 on the general rules of environmental protection and a new Act on Water Management No 57/1995 have been in force since early 1996. A new Government Decree on Air Pollution Abatement, the "Clean Air Act" is expected to be passed by the Parliament in 1998 along with a Decree on Waste Management and another on Protection of Ground waters. The Annexes of the Decrees will include emission limits, in compliance with EU standards. These new regulations are all based on EU Directives. With stricter enforcement of the new laws, more and more environmental-related investments are anticipated in all areas.

Ambient (background) air quality has demonstrated notable improvement in recent years in Hungary, although much of the improvement is the result of reduced industrial activity, rather than actual investment in environmental technologies. Following the privatization of 70 percent of the Hungarian economy, positive strides have been made to correct inefficient and highly polluting energy and industrial practices and to introduce more environment-friendly manufacturing technologies.

The Ministry for Environment & Regional Policy (MERP) estimates that manufacturing combined with the energy sector emits 40 percent of total air pollutants, the transportation sector emits another 40 percent, and 20 percent is accounted for by residences (home heating units).

THE ENERGY SECTOR is responsible for most SO2, NOX, and solid particles emissions. Gaseous emissions from the energy sector are still high, but solid particle emissions have decreased substantially as a number of electrostatic precipitators have been installed in coal-fired power plants. The total capacity of the Hungarian power system is 7,500 MW, about 40 percent of which is generated by oil and gas-fired plants. The share of the nuclear power generation increased in the last decade to about 40 percent of the total energy output. The coal-fired plants use locally mined brown coal and lignite with high sulphur content (3-4 percent).

Privatization of the energy sector began in 1995 and is nearing completion. All power plants with the exception of the country's only nuclear plant at Paks and one coal-fired plant have been privatized. The two U.S. companies with majority stakes in the Tisza Power Plant resp. Dunaferr/Dunaujvaros Power Plant are AES Summit Generation Ltd and El Paso/Tenneco Energy. As a result of privatization, German energy companies also have a strong presence in Hungary, followed by Belgian, U.S., Italian, etc. strategic investors.

Most Hungarian power generation facilities are outdated and inefficient. Coal-fired plants are scheduled for decommissioning over the next 10-15 years. The modernization program involves greenfield projects and refurbishment of existing facilities. As part of Hungary's efforts to join the EU, the upcoming power generation developments are aimed to meet environmental standards. Electrostatic precipitators have been installed in larger power plants, but thermal units require urgent upgrading of desulphurization and NOX reduction systems. Based on the 1995 Environment Act, the Hungarian government has set deadlines for industry to comply with the new standards. By 2003, environmental legislation will require 40 percent of the generating capacity to be either replaced or refurbished to meet emission standards.

ENERGY EFFICIENCY is an absolute priority for the future in Hungary. According to an OECD survey, Hungary uses approximately two-thirds more energy for a required task than the West-European average, producing more pollutants. Since the early 1990s, energy prices have more than doubled. Major industrial end users are introducing new technologies or updating old technologies to be more energy efficient. The public and various municipalities are most interested in saving on inefficient heating due to poor insulation, inadequate construction of houses and apartments and inefficient district heating systems. Beside grants from the Central Environment Fund (see later) there are special government programs to support the reconstruction/refurbishment of apartment blocks.

Emissions from the TRANSPORTATION SECTOR are still a significant source of air pollution in Hungary. Vehicles are by far the main source in Budapest, where they contribute more than 60 percent of local air pollution. The average age of Hungarian cars is over 11 years. To reduce air pollution from old cars, Hungary introduced the "green card" system to control vehicle exhaust emissions every 2-3 years by the Traffic Control Authority. Since 1995, no vehicles older than 4 years and/or without catalytic converters are allowed to be imported into the country. From January 1, 1998, all new passenger and commercial vehicles imported to Hungary have to meet Euro 2/Euro 3 emission standards, which correspond to current EU regulations. Locally produced Opel/GM and Suzuki cars are all outfitted with catalytic converters. In recent years, the Central Environmental Fund has supported installation of some 40,000 catalytic converters annually into old cars. Most

catalytic converters/exhaust systems are imported from the United States, Belgium, and Germany. Lead emission fell in recent years due to the extensive use of unleaded fuel. In 1999, production of leaded gasoline will stop. Environmental-friendly additives will replace leaded gasoline for use in old cars when required. The Budapest Transport Company (BKV) is also improving its bus fleet with environment-friendly engines/buses with some support from the Central Environment Fund via public procurement projects.

Hungarian statistics on the environmental sector are virtually unobtainable. Because the industry includes many diverse products, services, and technologies, it is extremely difficult to estimate market size or sales in environmental goods and services. According to Hungarian statistics on annual environmental expenditures and OECD practices, it is estimated that technology expenditures account for about 75 percent of all environmental spending, with services representing the remaining quarter. We assume the same for the air pollution control sector.

Market Size Table (US$ Millions) - Air pollution control

	Last Year (1997)		Current Year (1998)	
Growth in Percent For Last 3 years		Projected Growth in Percent for Next 3 years		
Total Market Size	65	75	5-6	8-10
Total Local Production	15	17		
Total Exports	5	6		
Total Imports	55	64	8-10	8-10
Imports from the U.S.	4.5	5.0	4-5	6-8
Exchange Rates ($1=HUF)	184	220		

Last Year's Import Market Share:

United States: 5%; Austria: 25%; Germany: 35%, France: 10% United Kingdom: 5%; Sweden: 5%.

Sources: the above estimated data are based on - papers published by the Ministry of Environment and Regional Policy, and the Regional Environmental Center - interviews with Ministry officials and local company representatives.

Best Sales Prospects

According to a recent Regional Environment Center survey, demand is expected to grow for the following products: instrumentation and process control/software, technologies for air sampling/ laboratory analysis for gaseous emissions and air pollution control/flue gas purification equipment.

The following equipment and services offer best sales prospects in the Hungarian market:
(HS = Harmonized System Schedule codes used for international trade statistics and customs tariffs)
Engineering service - HS S891

Catalytic converter - HS 8421.39.40
Industrial gas cleaning equipment/Dust collection and air purification equipment- HS 8421.39.80
Measuring instruments - HS 9026.00
Process control systems- HS 9032.00

The most effective way for U.S. firms to do business in Hungary is to team up with local environmental firms. The local presence serves to keep contact with potential investors/end users and to network with decision makers, which are very important elements of project management. Many industrial and/or energy-sector related developments are turnkey projects where the main contractor works with several subcontractors to perform engineering/consulting and machinery supply. So far, nearly all U.S. environmental companies that have succeed